

The following checklist is intended for use by teams or organizations working to improve or reengineer processes. It is especially useful to insure that the team/organization has considered all appropriate input, has evaluated alternative improvement solutions, and has a workable and effective implementation plan to make process changes. Although the checklist can be used as a step-by-step guide, it is primarily intended to validate proposed changes before they are implemented full scale, thus ensuring that the changes will not adversely impact customers, suppliers, or other segments of the process.

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Quality Checklist for Improved or Reengineered Processes

General Steps

- ☐ CUSTOMERS INVOLVED
(Were customers involved in everything below, including ideas on transition & communication? Are their expectations met for the proposed changes?)
- ☐ SUPPLIERS INVOLVED
(Were suppliers involved? Are their expectations met?)
- ☐ ALL SEGMENTS OF THE PROCESS INVOLVED
(Were workers from all stages of the process involved in design?)
- ☐ QUALITY METHODOLOGY USED
(What tools & data were used to arrive at root-causes & countermeasures?)
- ☐ ALTERNATIVES CONSIDERED
(Were other improvement alternatives considered? Is this the best alternative?)
- ☐ COST/BENEFIT ANALYSIS COMPLETE AND BENEFIT SHOWN
(Is this a real improvement, or did the work get moved to someone else?)
- ☐ PILOT, WITH ACTUAL END USERS, COMPLETED
- ☐ IMPROVEMENTS SUGGESTED FROM PILOT COMPLETE
(Were the changes indicated from the pilot made?)
- ☐ TRANSITION PLAN IN PLACE - PHASING & TIMING
(Is the new process/system to be phased in? Are the phases mapped out?)
- ☐ COMMUNICATION PLAN IN PLACE
(Is there a plan for how to effectively communicate the new system?)
- ☐ PLAN FOR MEASURING IMPROVEMENT IN PLACE
(Are there measures? Is there a process for collecting & processing data?)

Customers Involved

The following questions will help organizations ensure that they have adequately identified and considered customer information. Because customers (internal or external) receive process output, this checklist will encourage organizations to consider how to best meet customer requirements—the ultimate goal of every process.

☐ **All external customers have been identified**

☐ **All internal customers have been identified**

☐ **Customer input has been solicited and analyzed**

Customer input has been solicited through the following mechanisms:

☐ Customer interviews

Number of customers interviewed _____

Time frame for interviews _____

☐ Customer surveys (other than annual Indirect Product/Service Survey)

Number of surveys distributed _____

Number of surveys returned _____

Time frame for surveys _____

☐ Customer complaint data

Number of complaints analyzed _____

Time frame for complaints _____

☐ Focus groups

Number of groups _____

Total number of participants _____

Time frame for input _____

Suppliers Involved

The following questions will help organizations ensure that they have adequately identified and considered supplier information. Because the quality of supplier (internal or external) input can directly and dramatically affect process output, this checklist will encourage organizations to consider how to best incorporate the needs and capabilities of supplier to ensure that the process operates effectively and efficiently.

☐ **All external suppliers have been identified**

☐ **All internal suppliers have been identified**

☐ **Supplier input has been solicited and analyzed**

Supplier input has been solicited through the following mechanisms:

☐ Supplier interviews

Number of suppliers interviewed _____

Time frame for interviews _____

☐ Supplier surveys

Number of surveys distributed _____

Number of surveys returned _____

Time frame for surveys _____

☐ Supplier complaint data

Number of complaints analyzed _____

Time frame for complaints _____

☐ Focus groups

Number of groups _____

Total number of participants _____

Time frame for input _____

All Segments of the Process Involved

The following questions will help organizations ensure that they have adequately identified and considered employee information. Employees involved in the day-to-day operation of a process frequently have the most knowledge of how the process really works. This checklist will encourage organizations to consider how to best incorporate the profound knowledge of employees to ensure that the process operates effectively and efficiently.

☐ **All affected employees within all affected organizations have been identified**

Development, production, or operation of this process requires the following workers:

<i>Employee Type</i>	<i>FTEs</i>	<i>% Time for this process</i>
TSM	_____	_____
TEC	_____	_____
SSM	_____	_____
OS	_____	_____
GEN	_____	_____

☐ **Employee input has been solicited and analyzed**

Employee input has been solicited through the following mechanisms:

☐ Employee interviews

Number of employees interviewed _____

Time frame for interviews _____

☐ Employee surveys

Number of surveys distributed _____

Number of surveys returned _____

Time frame for surveys _____

☐ Employee complaint data

Number of complaints analyzed _____

Time frame for complaints _____

☐ Focus groups

Number of groups _____

Total number of participants _____

Time frame for input _____

Quality Methodology Used

It is essential that all LANL organizations use a similar high-level methodology in their re-engineering/improvement efforts to ensure that the Laboratory gathers and considers similar types of information across organizations. This checklist ensures that organizations use a high-level progression of activities to identify root causes for poor process performance and then select appropriate countermeasures.

☐ **Reengineering/improvement methodology has been selected**

The following methodology has been used to change the process: (check one)

- ☐ LANL 7-Step Methodology
☐ Other (specify) _____

☐ **Data collection and analysis have been completed**

Process improvement/reengineering efforts included use of data collected by the following methods (check all that were used)

- ☐ By collecting historical process data
☐ By sampling current process

Process improvement/reengineering efforts included use of the following tools to collect and analyze the measurement data (check all that were used)

- ☐ Check sheet
☐ Control chart
☐ Interviews
☐ Run chart
☐ Other (specify) _____

☐ **Root causes of poor process performance have been identified**

Process improvement/reengineering efforts included use of the following tools to identify root causes and design improvements (check all that were used)

- ☐ Affinity diagram
☐ Brainstorming/creative thinking
☐ Cause-and-effect diagram
☐ Cost-of-quality analysis
☐ Criticality analysis
☐ Failure mode & effect analysis
☐ Fault tree analysis
☐ Histogram
☐ Pareto analysis
☐ Other (specify) _____

Alternatives Considered

As part of their process improvement activities, organizations must design and consider alternative processes to correct major problems in current work processes. This checklist ensures that organizations have considered all viable improvement options before selecting a remedy.

☐ **Alternative improvement schemes have been designed**

The following number of alternative process designs have been considered _____

☐ **Selection criteria have been identified**

Criteria for selection included the following (check all that were used)

- ☐ Customer satisfaction
- ☐ Potential for cost/cycle-time reduction
- ☐ Cost of implementation
- ☐ Ease of implementation
- ☐ Functional content
- ☐ Time for implementation
- ☐ Other (specify) _____

☐ **Most viable alternative has been proposed**

Cost/Benefit Analysis Complete and Benefit Shown

Organizations must validate decisions to adopt one improvement alternative over other potential changes. This checklist ensures that organizations determine potential cost savings, evaluate the potential impact of the decision, establish criteria by which to evaluate alternatives, and select the most effective improvement solution.

☐ **Necessary analyses have been identified**

☐ **Analyses have been performed**

The following analyses have been performed (check all that were performed)

- ☐ Cost to implement
- ☐ Impact on the problem
- ☐ Benefit/cost relationship
- ☐ Cultural impact/resistance to change
- ☐ Implementation time
- ☐ Health, safety, and environmental considerations
- ☐ Other (specify) _____

The alternative selected affected the following process components (check all that apply)

- ☐ People (e.g., number of participants, skill levels employed)
- ☐ Materials (e.g., forms, computer software)
- ☐ Work methods (e.g., sequence of steps, approvals)
- ☐ Work environment (e.g., work location, lighting, distance between stations)
- ☐ Equipment (e.g., work stations, machinery)

☐ **Benefits have been identified**

The selected alternative provides benefits in the following areas (check all that apply)

- ☐ Cycle time
- ☐ Health, safety, or environmental considerations
- ☐ Cost
- ☐ Other (specify) _____

Pilot, with Actual End Users, Completed

Before fully implementing a process change, organizations should test the selected improvement to ensure it meets expectations and that no unwelcome effects are introduced. This checklist guides organizations in making sure proposed solutions are effectively tested and evaluated prior to full-scale implementation.

☐ **Pilot implementation has been designed**

The process redesign was tested in the following manner (check all that were used)

- ☐ Pilot test
- ☐ Modular test
- ☐ Black box test
- ☐ Simulation
- ☐ Dry run
- ☐ Acceptance test
- ☐ Other (specify) _____

☐ **Pilot implementation has been performed**

The tests of performance were (check appropriate box)

- ☐ Performed off-line
- ☐ Performed on-line

☐ **Measurement/analysis have been completed**

The following tools were used to collect and analyze test data (check all that were used)

- ☐ Check sheet
- ☐ Control chart
- ☐ Interviews
- ☐ Run chart
- ☐ Other (specify) _____

Improvements Suggested from Pilot Complete

Most pilot implementations identify areas in which the revised process does not function as anticipated or in which unanticipated problems arise. This checklist ensures that organizations have effectively dealt with such situations and have modified the improved process to eliminate undesirable effects.

☐ **Undesirable effects have been identified**

Unanticipated or unacceptable process performance included the follow (check all that were noted)

- ☐ Customer complaints
- ☐ Duplication of effort
- ☐ Employee dissatisfaction
- ☐ Excessive process cycle time
- ☐ Excessive process cost
- ☐ Excessive defects in product/service output
- ☐ Extensive use of materials
- ☐ Lack of clear responsibility within process
- ☐ Supplier complaints
- ☐ Other (specify) _____

☐ **Data has been analyzed and root causes determined**

The following tools were used to analyze data from the pilot implementation and to make process modifications (check all those that were used)

- ☐ Affinity diagram
- ☐ Benchmarking/competitive comparisons
- ☐ Brainstorming/creative thinking
- ☐ Carry-over analysis
- ☐ Cause-and-effect diagram
- ☐ Cost-of-quality analysis
- ☐ Failure mode & effect analysis
- ☐ Fault tree analysis
- ☐ Histogram
- ☐ Pareto analysis
- ☐ Selection matrix
- ☐ Stratification
- ☐ Tree Diagram
- ☐ Other (specify) _____

☐ **Remedies/improvements have been designed and implemented**

The modified process (check appropriate box)

- ☐ was retested
- ☐ was not retested

Transition Plan in Place - Phasing & Timing

Once an improved process has been tested, validated, and modified as necessary, an organization must develop a plan to systematically achieve full implementation. This checklist ensures that organizations carefully consider methods, schedules, and responsibilities for process implementation.

☐ **Transition/implementation plan has been developed**

The implementation plan was designed to introduce the reengineered process in the following manner (check appropriate box)

- ☐ Function by function
- ☐ All functions at once
- ☐ Activity by activity
- ☐ Other (specify) _____

☐ **Transition/implementation schedule has been developed**

Expected duration of implementation (check appropriate box)

- | | | |
|-----------------------------------|-----------------------------------|--|
| <input type="checkbox"/> 1 week | <input type="checkbox"/> 2 weeks | <input type="checkbox"/> 3 weeks |
| <input type="checkbox"/> 1 month | <input type="checkbox"/> 2 months | <input type="checkbox"/> 3 months |
| <input type="checkbox"/> 4 months | <input type="checkbox"/> 5 months | <input type="checkbox"/> 6 months |
| <input type="checkbox"/> 9 months | <input type="checkbox"/> 1 year | <input type="checkbox"/> other (specify) _____ |

☐ **Transition/implementation responsibilities have been assigned**

Communication Plan in Place

It is essential that all parties affected by improvement activities fully understand the rationale behind the process changes and the scope of those changes. This checklist encourages organizations to develop a plan to ensure effective two-way communication among all those involved.

☐ **Communication plan has been developed**

Process change information has been communicated to the following (check all those informed)

- ☐ DOE
- ☐ UC
- ☐ Senior management
- ☐ Customers
- ☐ Suppliers
- ☐ Process workers
- ☐ Others (specify) _____

Current revised process documentation (check appropriate box)

- ☐ is available at appropriate location(s)
- ☐ is not available

☐ **Communication schedule has been developed**

The following tools have been used to communicate about process changes (check all that were used)

- ☐ Memos
 - Time frame _____
 - Frequency _____
- ☐ Other organizational publications
 - Time frame _____
 - Frequency _____
- ☐ Training sessions
 - Time frame _____
 - Frequency _____
- ☐ Seminars/organizational meetings
 - Time frame _____
 - Frequency _____
- ☐ Other (specify) _____

☐ **Communication responsibilities have been assigned**

Plan for Measuring Improvement in Place

After completing improvement activities, organizations must implement and standardize the re-engineered/improved process. This checklist ensures that organizations have determined acceptable performance parameters for the process and established a process monitoring system to avoid future problems.

☐ **Measurement/evaluation plan has been developed**

Future feedback for this process will consist of the following (check all that will be used)

- ☐ Customer interviews
- ☐ Customer surveys
- ☐ Customer complaint data
- ☐ Employee input
- ☐ Appendix F evaluation
- ☐ Baldrige assessment feedback
- ☐ Other reviews/audits
- ☐ Management input
- ☐ Other (specify) _____

Monitors will use the following tools to check process performance (check all that will be used)

- ☐ Control chart
- ☐ Criticality analysis
- ☐ Data collection
- ☐ Failure mode & effect analysis
- ☐ Fault tree analysis
- ☐ Appendix F evaluation
- ☐ Baldrige assessment feedback
- ☐ Graphs/charts
- ☐ Histograms
- ☐ Pareto analysis
- ☐ Scatter diagrams
- ☐ Other (specify) _____

☐ **Measurement/evaluation schedule has been developed**

Management will formally review this process (check appropriate box)

- ☐ Quarterly
- ☐ Semiannually
- ☐ Annually
- ☐ Biennially
- ☐ Other (specify) _____

☐ **Measurement/evaluation responsibilities have been assigned**